



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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March 3, 2003

David Courtemanch
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

re: *Maine Nutrient Criteria Adoption Plan* submitted February 1, 2002

Dear Mr. Courtemanch:

Thank you for submitting Maine's *Nutrient Criteria Adoption Plan* by February 1, 2002. We concur with the plan and offer our comments below. We also provide an update on available documents and funding plans for FY2003. We would like to take this opportunity to thank you for your contributions to the Regional Technical Assistance Group (RTAG) and for your assistance to the New England Interstate Water Pollution Control Commission (NEIWPCC) and its contractor (ENSR) in compiling nutrient information to develop New England ecoregion-specific criteria linked to designated uses.

Overall, we feel the plan is excellent and we concur with your approach to develop nutrient criteria. The approach you presented is reasonable, scientifically defensible, and consistent with EPA Technical Guidance manuals, published ecoregional criteria documents and the November 14, 2001 memo from Geoff Grubbs to State and Interstate water program directors (all found on the EPA Nutrient web site:<www.epa.gov/waterscience/standards/nutrient.html>).

In contrast to most other states in New England, Maine already has numeric nutrient criteria for **lakes**. The Maine water quality standards (WQS) currently have extensive narrative criteria for lakes, including explicit measures of trophic state (chlorophyll *a* content, Secchi disk transparency, and total phosphorus content). Maine's numeric criteria for lakes consist of ranges of acceptable increases in lake phosphorus concentration for each of several water quality categories based on lake sensitivity to internal recycling. The numeric criteria appear in ME DEP's publication, *Phosphorus Control in Lake Watersheds: A Technical Guide to Evaluating New Development* (Table 3-2, Acceptable Increase in Lake Phosphorus Concentration page 11, Dennis et al, Maine DEP revised 1992), and are included by reference in the stormwater quality standards section of ME DEP's 1997 rules for implementing Maine's Stormwater Management Law. It is our understanding that ME DEP considers Table 3-2 to

represent a translator process between the narrative WQS and a permitted change in trophic state. For assistance in assigning lakes to the appropriate water quality category for their algal bloom risk, ME DEP has also established ranges of numeric criteria for Secchi disk, chlorophyll *a*, and phosphorus for the five lake water quality sub-categories. This variety of robust trophic parameters are used to determine the use attainment of lake WQS.

The numeric and narrative criteria for lakes have been implemented successfully in Maine for the past sixteen years, and it is our understanding that ME DEP intends to continue implementation without further statutory revisions to Maine's WQS. We also understand that the phosphorus control technical guide is now under revision involving a stakeholder process. It is our expectation and understanding that ME DEP will submit the revised guide (or at least the equivalent of the current Chapter 3 of the guide) to EPA for review.

For **rivers and streams**, our understanding of the plan indicates that the ME DEP's goal is to establish numeric nutrient criteria for rivers and streams that will detect cultural eutrophication as a result of increases in nutrient loading. ME DEP will develop nutrient criteria for rivers and streams based on Maine's existing statutory water quality classification system. Criteria will be stratified by class and based on stream trophic status estimated by a combination of metrics in order to establish the connection between nutrient enrichment, dissolved oxygen, and a symptom of enrichment (excessive growth in algal communities). Approaches being considered include a combination of vegetative productivity indicators, biochemical indicators, chemical nutrient concentrations. An aesthetics or human perception component may also be developed to connect trophic status to the current narrative criteria (i.e., fishable or swimmable). Development of criteria for rivers and streams will depend on adequate additional positions and funding.

We are aware that you have already made some progress with a recently initiated periphyton-sampling program. We appreciate the inclusion of sections for wetlands and marine/estuaries in the 2002 nutrient criteria development plan. We encourage you to think about how nutrient criteria for interstate rivers (e.g. the Androscoggin, Salmon Falls/Piscataqua) should be developed. We also thank you for the February 25, 2003 program update embodied in your response to our plan review questions, and for the list of specific additional funding needs.

Federal funding for nutrient criteria development will become more clear in the next several months with passage of the FY03 fiscal year budget. For FY03, we will target funding to assist states in development of criteria for rivers and streams. Based on guidance from EPA headquarters, which is not final, funding must be awarded in a competitive fashion.

To assist you in development of nutrient criteria, the following additional documents will soon be available.

- Collection and Evaluation of Ambient Nutrient Data. Data Distribution Report: New England Rivers and Streams (DRAFT) (ENSR/NEIWPCC, available March 2003).
- Evaluation of Total Nitrogen and Total Phosphorus in New England Rivers and Streams — The

- Application of Spatially Referenced Regression Models (USGS Water Resources Investigations Report, available August 2003 from USGS New Hampshire-Vermont District Office)
- Assessment of nutrient and chlorophyll relations at selected rivers in the New England Coastal Basins in Massachusetts and New Hampshire, June-September, 2001 (USGS Water Resources Investigations Report, available August 2003 from USGS New Hampshire-Vermont District Office)
 - New England Wadeable Streams Interim Data Report 2001 (EPA Region 1, available on CD March 2003 from Hilary Snook, 617-918-8670)

We apologize for the extensive delay in providing formal comments on your plan. We hope this letter assists your efforts to develop numeric criteria, and we look forward to the results of the studies described in the plan. An RTAG meeting will be held in the spring to discuss the ENSR report described above. If you have more questions, feel free to call Jennie Bridge of my staff at 617-918-1685 or Matthew Liebman, Regional Nutrient Criteria coordinator at 617-918-1626.

Sincerely,

Stephen J. Silva
Director, EPA's Maine Program

electronic cc:

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